

WHO / UNICEF

Joint Monitoring Programme
for Water Supply and Sanitation

Estimates for the use of

**Improved Drinking-Water Sources
and Improved Sanitation Facilities**

Updated March 2010

childinfo.org

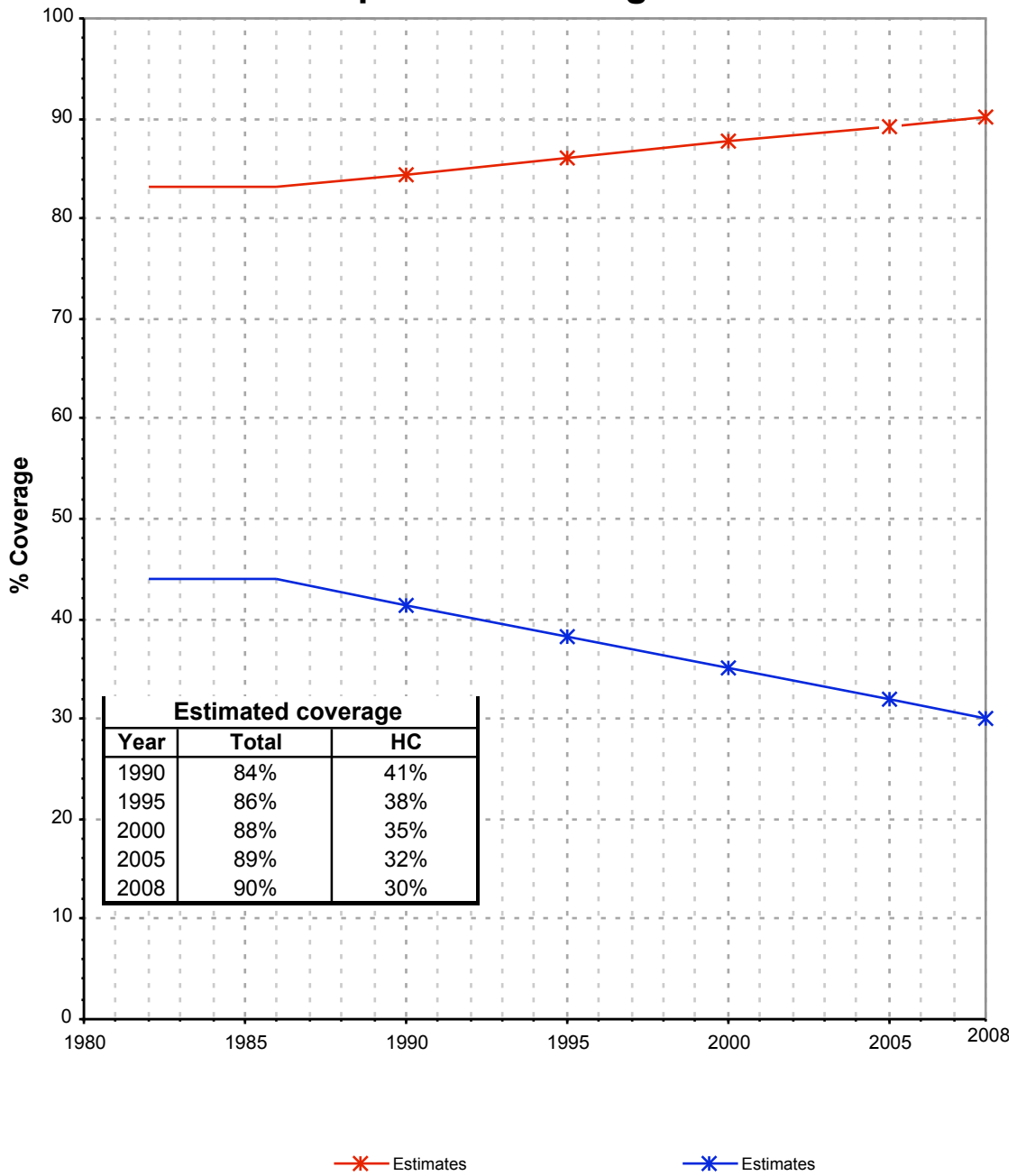
Access to drinking water sources		DHS98			Ghana			Access to drinking water sources		JMP99			Ghana		
Demographic and Health Survey					1998			Global Water Supply and Sanitation Assessment 2000. Water Supply and Sanitation Sector Questionnaire - 1999. Form 6 sent to WHO.					1999		
Original denomination	Classification	Urban	Rural	Total	Original denomination	Classification	Urban	Rural	Total						
Piped into residence	Tap water	84.0	75.7		Population served with household connection	Tap water	31.3	0.0							
	House connections	41.4	3.5			House connections									
	Piped water into dwelling					Piped water into dwelling									
	Piped water to yard/plot					Piped water to yard/plot									
Public tap/ neighbour's house	Public tap, standpipe	42.6	12.2			Public tap, standpipe									
	Other					Other									
	Ground water	9.6	47.7		Population without household connection but with reasonable access to a public	Ground water	40.3	53.7							
	Protected ground water	3.2	29.6			Protected ground water	40.3	53.7							
	Unprotected ground water					Unprotected ground water									
	Protected wells or springs	3.2	29.6	0.0		Protected wells or springs									
	Private					Private									
	Public					Public									
	Other					Other									
	Unprotected wells or springs					Unprotected wells or springs									
	Private					Private									
	Public					Public									
	Other					Other									
	All wells	9.2	46.3			All wells									
	Private	0.8	1.9			Private									
	Public	5.2	14.8			Public									
	Other					Other									
Bore hole	Tubewell, borehole	3.2	29.6			Tubewell, borehole									
	Private					Private									
	Public					Public									
	Other					Other									
	Traditional wells	6.0	16.7			Traditional wells									
	Private	0.8	1.9			Private									
	Public	5.2	14.8			Public									
	Other					Other									
	Protected well					Protected well									
	Private					Private									
	Public					Public									
	Other					Other									
	Unprotected well					Unprotected well									
	Private					Private									
	Public					Public									
	Other					Other									
Spring	All springs	0.4	1.4			All springs									
	Private					Private									
	Public					Public									
	Other					Other									
	Protected spring					Protected spring									
	Private					Private									
	Public					Public									
	Other					Other									
	Unprotected spring					Unprotected spring									
	Private					Private									
	Public					Public									
	Other					Other									
	Rainwater	0.5	0.9			Rainwater									
Rainwater	Covered cistern/tank	0.5	0.9			Covered cistern/tank									
	Uncovered cistern/tank					Uncovered cistern/tank									
	Bottled water					Bottled water									
	with other improved					with other improved									
	without other improved					without other improved									
	Surface water	4.4	32.4			Surface water									
River/stream	River	3.4	25.5			River									
	Lake					Lake									
Dam	Dam	0.9	4.4			Dam									
Pond/lake	Pond	0.1	2.5			Pond									
	Stream					Stream									
	Irrigation channel					Irrigation channel									
	Other					Other									
	Other improved sources					Other improved sources									
	Other					Other									
	Other					Other									
	Other non-improved	1.5	3.3		Total population unserved	Other non-improved	28.4	46.3							
	Cart with small tank/drum					Cart with small tank/drum									
Tanker/truck	Tanker truck provided	1.2	0.5			Tanker truck provided									
Dugout	Other	0.3	2.8			Other									
	Other					Other									
	DK/missing					DK/missing									
	Total	100.0	100.0			Total	100.0	100.0							
Calculations					Calculations										
Estimations	Protected Wells (estimated using CWIQ97)	3.7	10.3		Estimations										
	Springs considered improved based on DHS98	0.1	0.1												
Access to improved drinking water sources :		92%	57%		Access to improved drinking water sources :		72%	54%							
Access to house connections :		41%	4%		Access to house connections :		31%	0%							
Used for the estimates:		Yes	Yes		Used for the estimates:		No	No							
Used for the estimates:		Yes	Yes		Used for the estimates:		No	No							
Ratios	HC / Tap water	49%	22%		Ratios	HC / Tap water	100%								
	Public tap / Tap water	51%	78%			Public tap / Tap water									
	Tubewell + protected well / All wells					Tubewell + protected well / All wells									
	Protected wells / Traditional wells					Protected wells / Traditional wells									
	Tubewell / All wells	35%	64%			Tubewell / All wells									
	Protected springs / All springs					Protected springs / All springs									
Protect. well & spring / well & spring				Protect. well & spring / well & spring											
Number of people covered by the survey:					Number of people covered by the survey:		6700	8361							
Number of households covered by the survey:					Number of households covered by the survey:										
Total population:					Total population:										
Comments					Comments										

Access to drinking water sources		DHS03		Ghana		Access to drinking water sources		WHS03		Ghana						
Demographic and Health Survey				2003				World Health Survey				2003				
Original denomination	Classification	Urban	Rural	Total	Original denomination	Classification	Urban	Rural	Total	Original denomination	Classification	Urban	Rural	Total		
	Tap water	72.5	10.8			Tap water	71.6	24.0			Tap water	71.6	24.0			
	House connections	33.4	1.9		Piped water through house connection or yard	House connections	34.6	5.7			House connections	34.6	5.7			
Piped into dwelling	Piped water into dwelling	11.5	0.7			Piped water into dwelling					Piped water into dwelling					
Piped into compound/plot	Piped water to yard/plot	21.9	1.2			Piped water to yard/plot					Piped water to yard/plot					
Public tap	Public tap, standpipe	39.1	8.9		Public standpipe	Public tap, standpipe	37.0	18.3			Public tap, standpipe	37.0	18.3			
Sachet water	Other					Other					Other					
	Ground water	18.9	57.8			Ground water	20.5	52.5			Ground water	20.5	52.5			
	Protected ground water	10.2	42.8			Protected ground water	15.6	41.8			Protected ground water	15.6	41.8			
	Unprotected ground water	8.4	14.1		Protected dug well or protected spring	Unprotected ground water	4.9	10.7			Unprotected ground water	4.9	10.7			
	Protected wells or springs	10.2	42.8			Protected wells or springs	6.3	9.3	0.0		Protected wells or springs	6.3	9.3	0.0		
	Private	2.4	1.7			Private					Private					
	Public	7.8	41.1			Public					Public					
	Other					Other					Other					
	Unprotected wells or springs	8.4	14.1		Unprotected dug well or spring	Unprotected wells or springs	4.9	10.7			Unprotected wells or springs	4.9	10.7			
	Private	2.5	1.3			Private					Private					
	Public	5.9	12.8			Public					Public					
	Other					Other					Other					
	All wells	18.6	56.9	0.0		All wells	9.3	32.5			All wells	9.3	32.5			
	Private	4.9	3.0			Private					Private					
	Public	13.7	53.9			Public					Public					
	Other					Other					Other					
	Tubewell, borehole				Protected tube well or bore hole	Tubewell, borehole	9.3	32.5			Tubewell, borehole	9.3	32.5			
	Private					Private					Private					
	Public					Public					Public					
	Other					Other					Other					
	Traditional wells	18.6	56.9	0.0		Traditional wells					Traditional wells					
	Private	4.9	3.0			Private					Private					
	Public	13.7	53.9			Public					Public					
	Other					Other					Other					
	Protected well	10.2	42.8	0.0		Protected well					Protected well					
	Private	2.4	1.7			Private					Private					
	Public	7.8	41.1			Public					Public					
	Other					Other					Other					
	Unprotected well	8.4	14.1	0.0		Unprotected well					Unprotected well					
	Private	2.5	1.3			Private					Private					
	Public	5.9	12.8			Public					Public					
	Other					Other					Other					
	All springs	0.3	0.9			All springs					All springs					
	Private					Private					Private					
	Public					Public					Public					
	Other					Other					Other					
	Protected spring					Protected spring					Protected spring					
	Private					Private					Private					
	Public					Public					Public					
	Other					Other					Other					
	Unprotected spring					Unprotected spring					Unprotected spring					
	Private					Private					Private					
	Public					Public					Public					
	Other					Other					Other					
	Rainwater	0.5	0.2			Rainwater	1.2	1.1			Rainwater	1.2	1.1			
Rainwater	Covered cistern/tank	0.5	0.2		Rainwater (into tank or cistern)	Covered cistern/tank	1.2	1.1			Covered cistern/tank	1.2	1.1			
	Uncovered cistern/tank					Uncovered cistern/tank					Uncovered cistern/tank					
Sachet water	Bottled water	3.0	0.3			Bottled water					Bottled water					
	with other improved					with other improved					with other improved					
	without other improved					without other improved					without other improved					
	Surface water	2.6	30.4		Water taken directly from pond-water or stream	Surface water	2.3	20.7			Surface water	2.3	20.7			
River, stream	River	2.0	24.3			River					River					
	Lake					Lake					Lake					
Dam	Dam	0.1	3.7			Dam					Dam					
Pond, lake	Pond	0.5	2.4			Pond					Pond					
	Stream					Stream					Stream					
	Irrigation channel					Irrigation channel					Irrigation channel					
	Other					Other					Other					
	Other improved sources					Other improved sources					Other improved sources					
	Other					Other					Other					
	Other					Other					Other					
	Other non-improved	2.7	0.4			Other non-improved	4.4	1.8			Other non-improved	4.4	1.8			
	Cart with small tank/drum					Cart with small tank/drum					Cart with small tank/drum					
Tanker truck	Tanker truck provided	2.3	0.4		Tanker-truck, vendor	Tanker truck provided	4.4	1.8			Tanker truck provided	4.4	1.8			
Other	Other	0.4	0.0			Other					Other					
	Other					Other					Other					
Missing	DK/missing	0.0	0.1			DK/missing					DK/missing					
	Total	100.2	100.0			Total	100.0	100.1			Total	100.0	100.1			
Calculations	Ratio private standpipe/all standpipe	35.9%	11.9%		Calculations					Calculations						
Estimations	Sachet water considered improved based on DHS08	2.6	0.2		Estimations					Estimations						
	Springs considered improved based on DHS08	0.1	0.1													
Access to improved drinking water sources :		86%	54%		Access to improved drinking water sources :		88%	67%		Access to improved drinking water sources :		88%	67%			
Access to house connections :		33%	2%		Access to house connections :		35%	6%		Access to house connections :		35%	6%			
Used for the estimates :		Yes	Yes		Used for the estimates :		Yes	Yes		Used for the estimates :		Yes	Yes			
Ratios	HC / Tap water	46%	18%		Ratios	HC / Tap water	48%	24%		Ratios	HC / Tap water	48%	24%			
	Public tap / Tap water	54%	82%			Public tap / Tap water	52%	76%			Public tap / Tap water	52%	76%			
	Tubewell + protected well / All wells	55%	75%			Tubewell + protected well / All wells					Tubewell + protected well / All wells					
	Protected wells / Traditional wells					Protected wells / Traditional wells					Protected wells / Traditional wells					
	Tubewell / All wells					Tubewell / All wells					Tubewell / All wells					
	Protected springs / All springs					Protected springs / All springs					Protected springs / All springs					
	Protect. well & spring / well & spring	55%	75%			Protect. well & spring / well & spring	56%	47%			Protect. well & spring / well & spring					
Springs/Groundwater	2%	2%														
Number of people covered by the survey:					Number of people covered by the survey:					Number of people covered by the survey:						
Number of households covered by the survey:					Number of households covered by the survey:					Number of households covered by the survey:						
Total population:					Total population:					Total population:						
Comments					Comments					Comments						

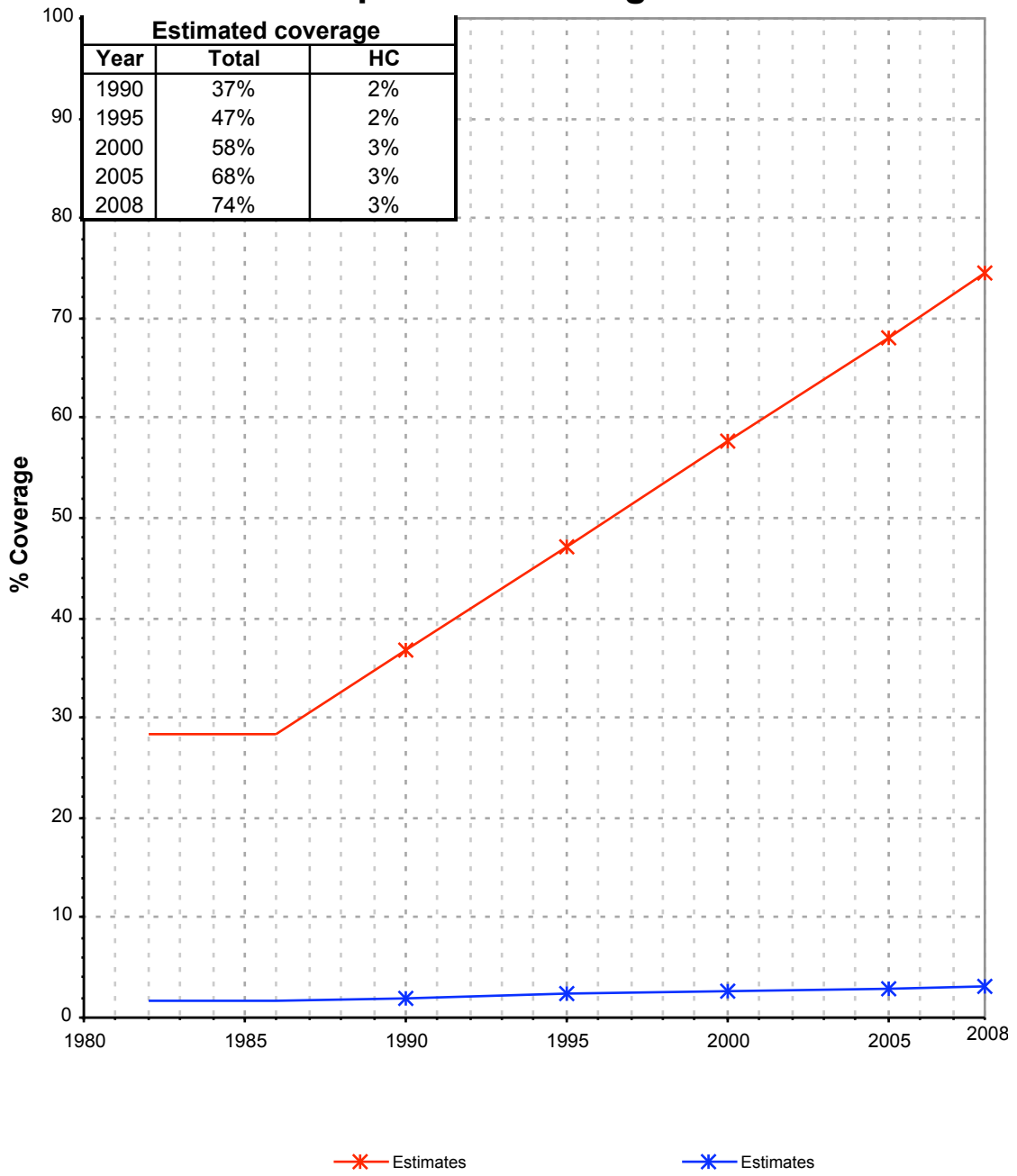
Access to drinking water sources		CWIQ97		Ghana		Access to drinking water sources		LSS98		Ghana	
CORE WELFARE INDICATORS QUESTIONNAIRE (CWIQ)				LIVING STANDARDS SURVEY 4							
Statistical Service				Statistical Service							
		1997						1998			
Original denomination	Classification	Urban	Rural	Total	Original denomination	Classification	Urban	Rural	Total		
Piped into dwelling	Tap water	75.0	12.4			Tap water	65.0	19.9			
	House connections	36.8	2.1			House connections	34.0	3.4			
	Piped water into dwelling				Indoor plumbing/standpipe	Piped water into dwelling	34.0	3.4			
	Piped water to yard/plot										
Public Tap	Public tap, standpipe	38.2	10.3		Public standpipe	Public tap, standpipe	14.4	11.1			
	Other				Private outside standpipe/tap	Other	16.6	4.3			
	Ground water	13.2	45.7			Ground water	9.2	42.7			
	Protected ground water	9.7	37.2			Protected ground water	1.5	28.3			
	Unprotected ground water	3.5	8.5			Unprotected ground water					
	Protected wells or springs	9.7	37.2			Protected wells or springs	1.5	28.3	0.0		
	Private					Private					
	Public					Public					
	Other					Other					
	Unprotected wells or springs	3.5	8.5	0.0		Unprotected wells or springs					
	Private					Private					
	Public					Public					
	Other					Other					
	All wells	13.2	45.7			All wells	9.2	42.7			
	Private					Private					
	Public					Public					
	Other					Other					
Borehole	Tubewell, borehole	4.1	30.9		Well with pump	Tubewell, borehole	1.5	28.3			
	Private					Private					
	Public					Public					
	Other					Other					
	Traditional wells	9.2	14.8		Well without pump	Traditional wells	7.7	14.4			
	Private					Private					
	Public					Public					
	Other					Other					
Protected well	Protected well	5.6	6.2			Protected well					
	Private					Private					
	Public					Public					
	Other					Other					
Unprotected well	Unprotected well	3.5	8.5			Unprotected well					
	Private					Private					
	Public					Public					
	Other					Other					
	All springs					All springs					
	Private					Private					
	Public					Public					
	Other					Other					
	Protected spring					Protected spring					
	Private					Private					
	Public					Public					
	Other					Other					
	Unprotected spring					Unprotected spring					
	Private					Private					
	Public					Public					
	Other					Other					
	Rainwater					Rainwater	0.2	0.2			
	Covered cistern/tank				Rainwater	Covered cistern/tank	0.2	0.2			
	Uncovered cistern/tank					Uncovered cistern/tank					
	Bottled water					Bottled water					
	with other improved					with other improved					
	without other improved					without other improved					
River, lake, stream	Surface water	4.2	39.3		River, lake, spring, pond	Surface water	6.6	35.1			
	River					River					
	Lake					Lake					
	Dam					Dam					
	Pond					Pond					
	Stream					Stream					
	Irrigation channel					Irrigation channel					
	Other					Other					
	Other improved sources					Other improved sources	12.5	1.1			
	Other				Neighbouring household	Other	12.5	1.1			
	Other					Other					
	Other non-improved	7.5	2.6			Other non-improved	6.5	2.1			
Vendor	Cart with small tank/drum	7.3	1.7		Water vendor	Cart with small tank/drum	6.3	1.1			
	Tanker truck provided				Water truck/tanker service	Tanker truck provided	0.1	0.8			
	Other	0.3	0.8			Other					
Other	Other				Other	Other			0.2		
	DK/missing					DK/missing					
	Total	100.0	100.0			Total	100.0	100.0			
Calculations						Ratio private standpipe/all standpipe	0.0%	0.0%			
Estimations						Protected Wells (estimated using CWIQ97)	4.8	6.1			
Access to improved drinking water sources :		85%	50%		Access to improved drinking water sources :		84%	55%			
Access to house connections :		37%	2%		Access to house connections :		34%	3%			
Used for the estimates:		Yes	Yes		Used for the estimates:		Yes	Yes			
Ratios	HC / Tap water	49%	17%		Ratios	HC / Tap water	52%	18%			
	Public tap / Tap water	51%	83%			Public tap / Tap water	22%	59%			
	Tubewell + protected well / All wells	73%	81%			Tubewell + protected well / All wells					
	Protected wells / Traditional wells	62%	42%			Protected wells / Traditional wells					
	Tubewell / All wells	31%	68%			Tubewell / All wells	16%	66%			
	Protected springs / All springs					Protected springs / All springs					
	Protect. well & spring / well & spring	73%	81%			Protect. well & spring / well & spring					
Number of people covered by the survey:					Number of people covered by the survey:						
Number of households covered by the survey:					Number of households covered by the survey:						
Total population:					Total population:						
Comments					Comments						

Ghana			DRINKING WATER							
			URBAN				RURAL			
			House connection		Total		House connection		Total	
Source	Code	Year	Used	Not used	Used	Not used	Used	Not used	Used	Not used
Living standards Survey	LSS88	1988		28.6		28.6		1.0		1.0
Demographic and Health Survey	DHS88	1988	36.3		84.1		1.9		28.4	
Demographic and Health Survey	DHS93	1993	37.2		88.1		2.0		46.7	
Multiple Indicator Cluster Survey	MICS95	1995	48.0		84.0		1.0		50.0	
Demographic and Health Survey	DHS98	1998	41.4		91.5		3.5		56.6	
Global Water Supply and Sanitation Assessment 2000.	JMP99	1999		31.3		71.6		0.0		53.7
Demographic and Health Survey	DHS03	2003	33.4		85.9		1.9		54.1	
World Health Survey	WHS03	2003	34.6		88.4		5.7		66.9	
Core Welfare Indicator Questionnaire	CWIQ03	2003	36.0		88.5		2.3		65.5	
Multiple Indicator Cluster Survey	MICS06	2006	26.9		89.4		2.7		68.8	
CORE WELFARE INDICATORS QUESTIONNAIRE (CWIQ)	CWIQ97	1997	36.8		84.7		2.1		49.6	
LIVING STANDARDS SURVEY 4	LSS98	1998	34.0		84.0		3.4		54.5	
Demographic and Health Survey	DHS08	2008	27.0		92.8		2.2		76.5	

Ghana - urban - Use of improved drinking water sources



Ghana - rural - Use of improved drinking water sources



Drinking Water

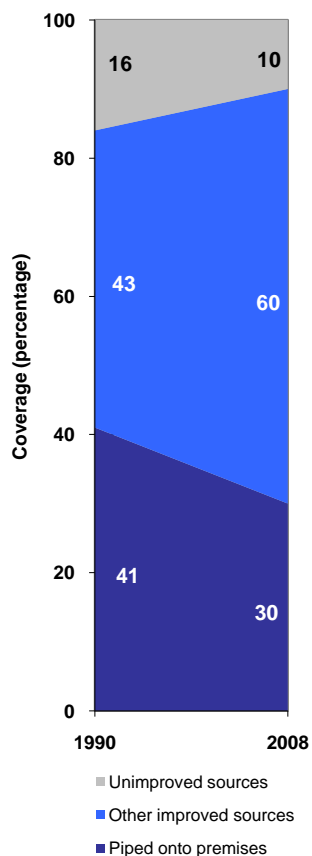
Ghana	Drinking water coverage estimates					
	Urban (%)		Rural (%)		Total (%)	
	1990	2008	1990	2008	1990	2008
Piped into premises	41	30	2	3	16	17
Other improved source	43	60	35	71	38	65
Unimproved source	16	10	63	26	46	18

Source: WHO/UNICEF JMP, 2010

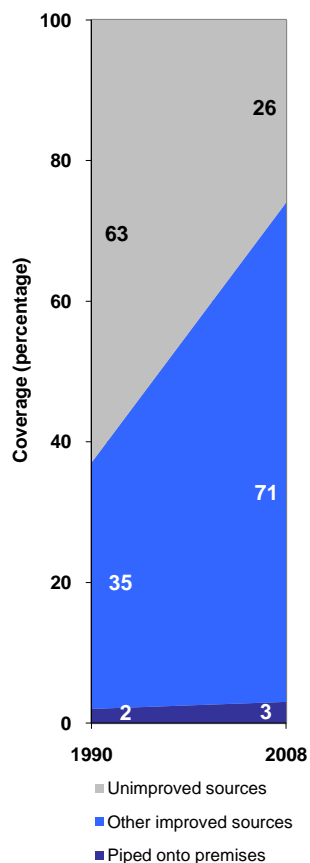
Ghana	Urban		Rural		Total	
	1990	2008	1990	2008	1990	2008
Population (x1000)	5454	11676	9513	11675	14968	23351

Source: UN / Population Division, 2008

Urban drinking water trends



Rural drinking water trends



Total drinking water trends

